



EQulS Data Processor (EDP) Guidance Manual

**Version 2.0
February 2022**

**Water Quality Planning Bureau
Information Management Bureau**

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Document History			
Revision #	Revision Date	Revised By	Notes
1.0	3/3/2021	Jolene McQuillan	Initial document for general EDP manual
1.1	4/6/2021	Jolene McQuillan	Added info for EQEDD download page
2.0	2/15/2022	Jolene McQuillan and Deanna Tarum	Updated all sections, including new screenshots and new submission instructions

1.0 EQuIS DATA PROCESSOR OVERVIEW

The purpose of this guidance manual is to provide instructions on how to use the EQuIS Data Processor (EDP). The EDP is a standalone application that must be used by data providers to check their electronic data deliverable (EDD) files prior to submission to the Montana EQuIS database. The EDP performs a series of formatting checks on the EDD and then identifies any records that have errors. The EDP checks data for the following:

- Required Fields
- Field Length
- Data Types
- Valid Reference Values
- Duplicate Rows
- Range Checking
- Record Parent-Child Relationships

If errors are detected, the application allows the data provider to correct the errors directly in EDP. After all errors have been corrected, the EDP must be re-run to ensure that no errors remain. EDD files that pass through the EDP error-free should also result in an error-free import into the Montana EQuIS database. The EDP does not compare the data in the EDD to the data in the database, so it is possible to receive an error when submitting to Montana EQuIS if the data in your EDD conflicts with data in the database.

2.0 EDP INSTALLATION

To use the EDP application, the following three steps must be completed in the order shown:

1. Download and install the EDP application
2. Download the appropriate EDD format
3. Register the EDD format

2.1 DOWNLOAD AND INSTALL THE EDP APPLICATION

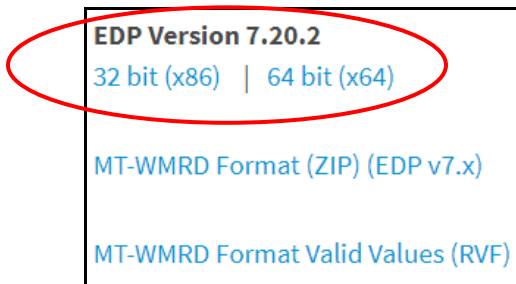
The download page for the EDP application is associated to the EDD format you will be using. This guidance manual will use the MT-WMRD EDD as an example, but be sure to start from the webpage that corresponds to the EDD you are required to use.

- MT-WMRD EDD: <https://earthsoft.com/products/edp/edp-wmr-format-for-mtdeq/>
 - Montana Waste Management and Remediation Division EDD
 - MT-WMRD Support webpage: <https://deq.mt.gov/Land/rem/etreads>
- MTDEQ_WQX (MT-eWQX): <https://earthsoft.com/products/edp/edp-format-for-mtdeq/>
 - Montana EQuIS Water Quality Exchange EDD
 - MT-eWQX Support webpage: <http://deq.mt.gov/water/surfacewater/SubmitData>
- MTDEQ EQEDD: <https://earthsoft.com/products/edp/edp-format-for-mtdeq-eqedd/>
 - Montana DEQ EQEDD (standard EQuIS EQEDD with Montana reference values)

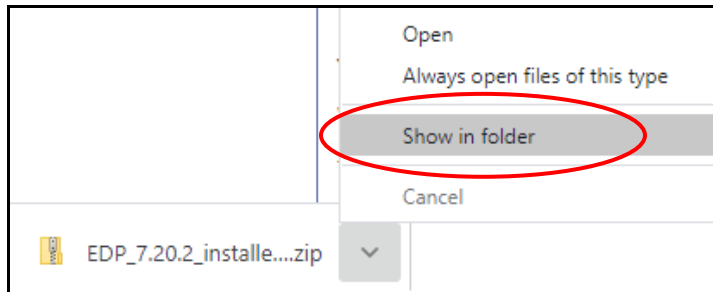
NOTE: These instructions are specific to the Chrome web browser. Steps may vary with other Chrome settings or when using other web browsers.

From the appropriate EDP/EDD Download page:

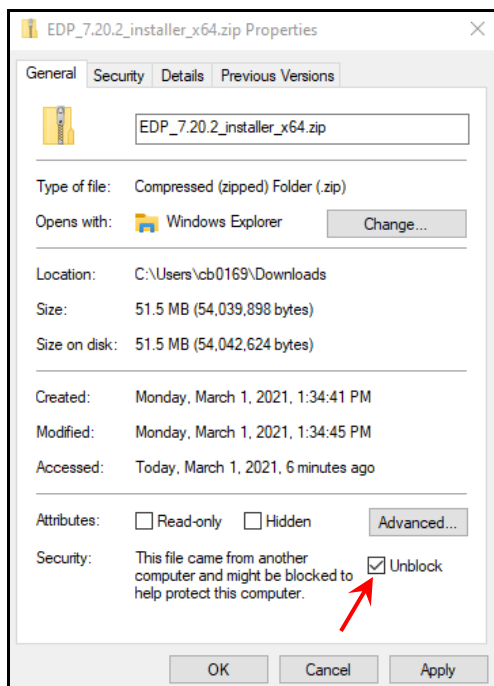
1. Click the correct EDP download link, either '32 bit (x86)' or '64 bit (x64)'.
 - a. To determine if your computer requires x32 or x64 bit, open your Start menu, select 'Settings' (gear icon), select 'System', and select 'About'. The system type should indicate if it's a 32 or 64-bit operating system.



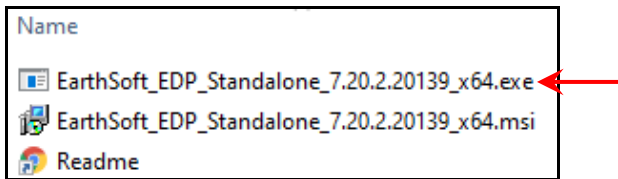
2. The .zip EDP file will be downloaded to your computer. In the lower left corner, select 'Show in folder'.



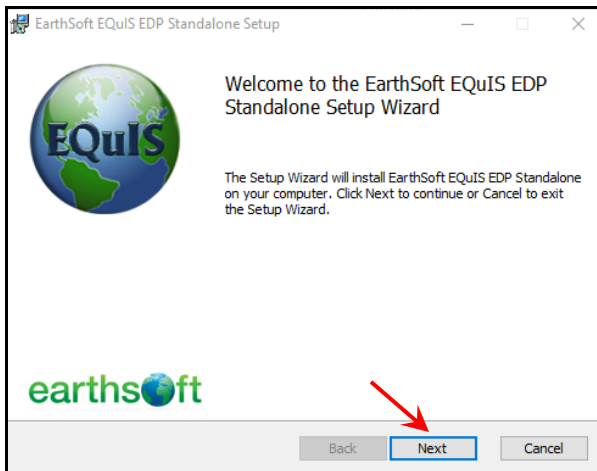
3. When you have located the downloaded .zip file, right-click on the file, select 'Properties', and check 'Unblock' if it's available. Select 'OK' to exit the file properties window.



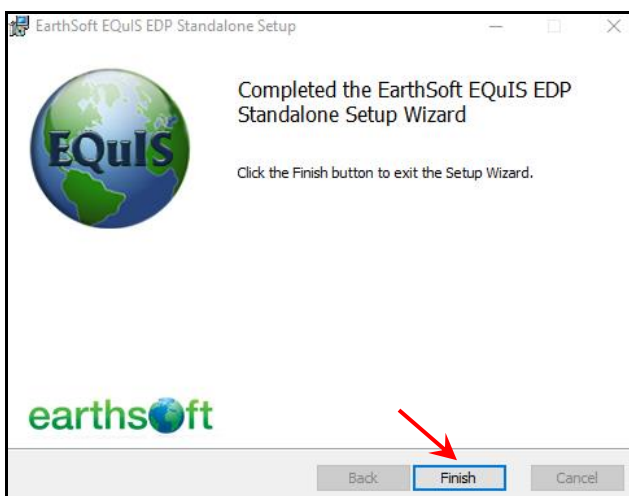
4. Right-click on the .zip file and select 'Extract All'. Save the files to a location on your computer.
5. Double-click the .exe file that was extracted to start the install.



6. The installation wizard will launch. Click 'Next'.



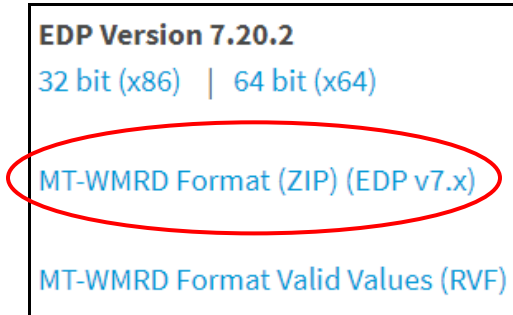
7. The License Agreement screen will appear. Select the 'I accept the terms in the license agreement' checkbox and click 'Next'.
8. On the Custom Setup screen, select 'Next', no changes are needed.
9. Select 'Install'. The install will run and when complete, select 'Finish'.



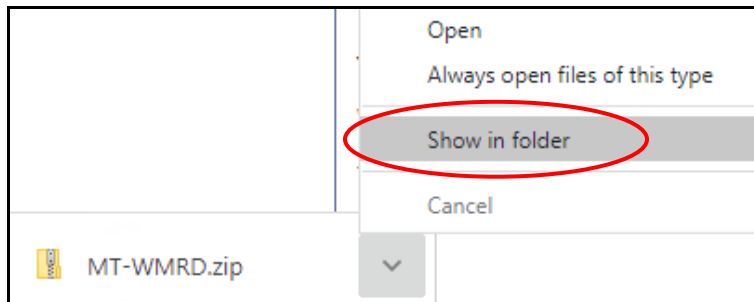
2.2 DOWNLOAD THE EDD FORMAT

From the appropriate EDP/EDD Download page:

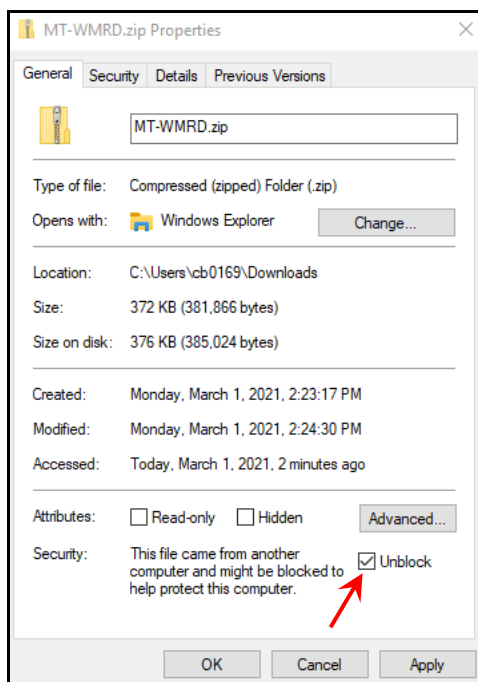
1. Click the 'MT-WMRD Format (ZIP) (EDP v7.x)' link to start the download.



2. The .zip EDD file will be downloaded to your computer. In the lower left corner, select 'Show in folder'.



3. When you have located the downloaded .zip file, right-click on the file, select 'Properties', and check 'Unblock' if it's available. Select 'OK' to exit the file properties window.



- Right-click on the .zip file and select 'Extract All'. Save the files to a location on your computer. After extracting, it is recommended to move the unzipped EDD folder to your EDP application folder: C:\Program Files\EarthSoft\EDP\Formats.

Name	Date modified	Type	Size
MT-WMRD.dll	2/8/2021 8:40 AM	DLL File	53 KB
MT-WMRD.rvf	2/8/2021 8:39 AM	RVF File	1,016 KB
MT-WMRD.xml	2/8/2021 8:40 AM	XML Document	17 KB
MT-WMRD.xse	2/8/2021 8:40 AM	XSE File	457 KB
MT-WMRD-enum.xml	2/8/2021 8:40 AM	XML Document	29 KB

2.3 DOWNLOAD THE VALID VALUES/REFERENCE VALUES (IF NEEDED)

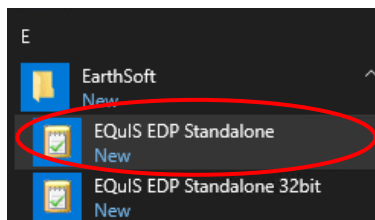
The .zip file downloaded in Section 2.2 contains all the required files to run the EDD. Most of the EDD files are not updated frequently, but the valid value/reference value file is often updated monthly (file extension: .rvf). If you have previously downloaded the EDD format, but want the most up-to-date .rvf file, download the latest .rvf and replace the original in your EDD format folder.

EDP Version 7.20.2
[32 bit \(x86\)](#) | [64 bit \(x64\)](#)
[MT-WMRD Format \(ZIP\) \(EDP v7.x\)](#)
[MT-WMRD Format Valid Values \(RVF\)](#)

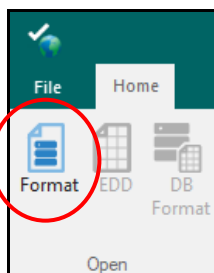
2.4 REGISTER THE EDD FORMAT

Once the EDP application is downloaded and installed, and the EDD is downloaded, the EDD format must be registered.

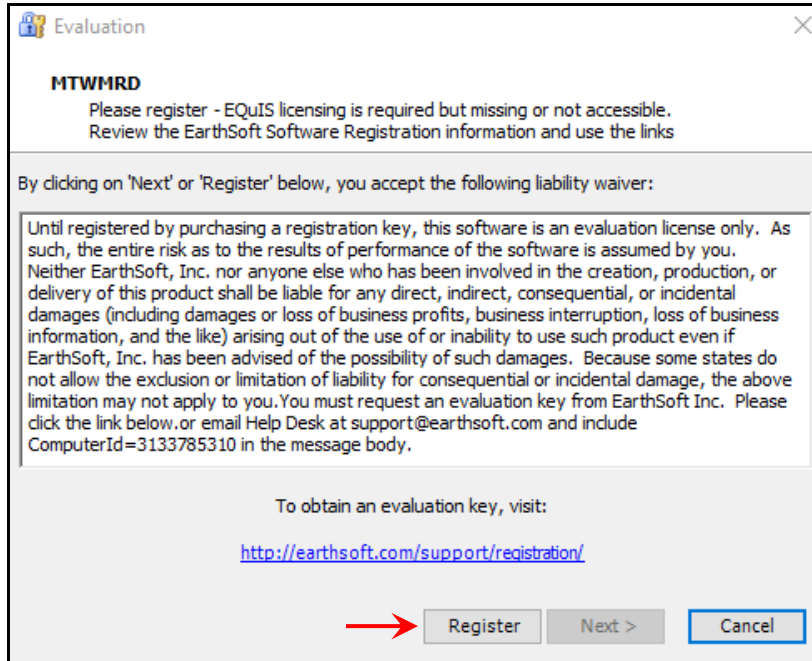
- Open the EQuIS EDP Standalone application.



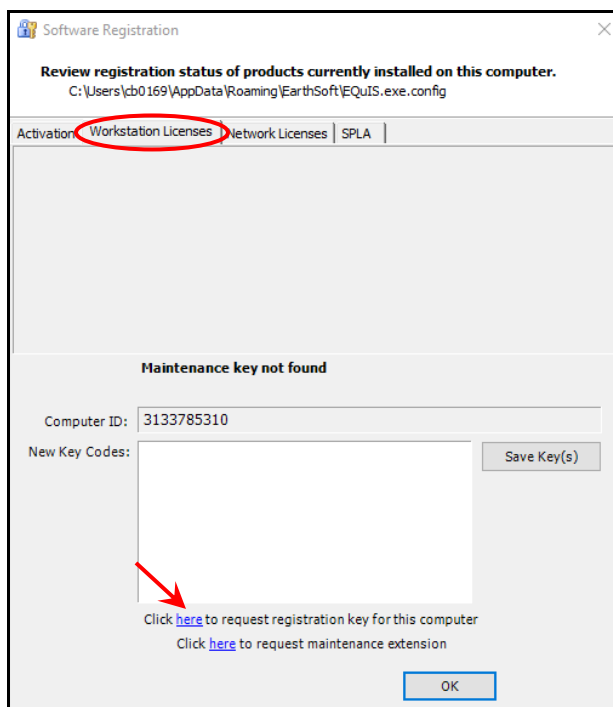
- The EDP main screen will open. Click the 'Format' button from the Home Ribbon.



3.]Browse to the folder where the EDD format files were saved in Section 2.2 (C:\Program Files\EarthSoft\EDP\Formats). Select the .xse format file and click 'Open'.
4. The EDD Evaluation screen will appear the first time you open a format. Click the 'Register' button.



5. In the Software Registration window, select the 'Workstation Licenses' tab and then click the link directly under the New Key Codes box: 'Click here to request registration key for this computer.'



6. An internet window will open for 'EDP Format for MT-WMRD Registration'. Confirm the registration page is for the EDD format you want to register. Enter the requested information. The Computer ID field should automatically be populated from the EDP Software Registration screen. Select 'Submit'. The registration keys you will receive are associated with your Computer ID, so if you change computers, you will need to request new keys for your EDD formats.

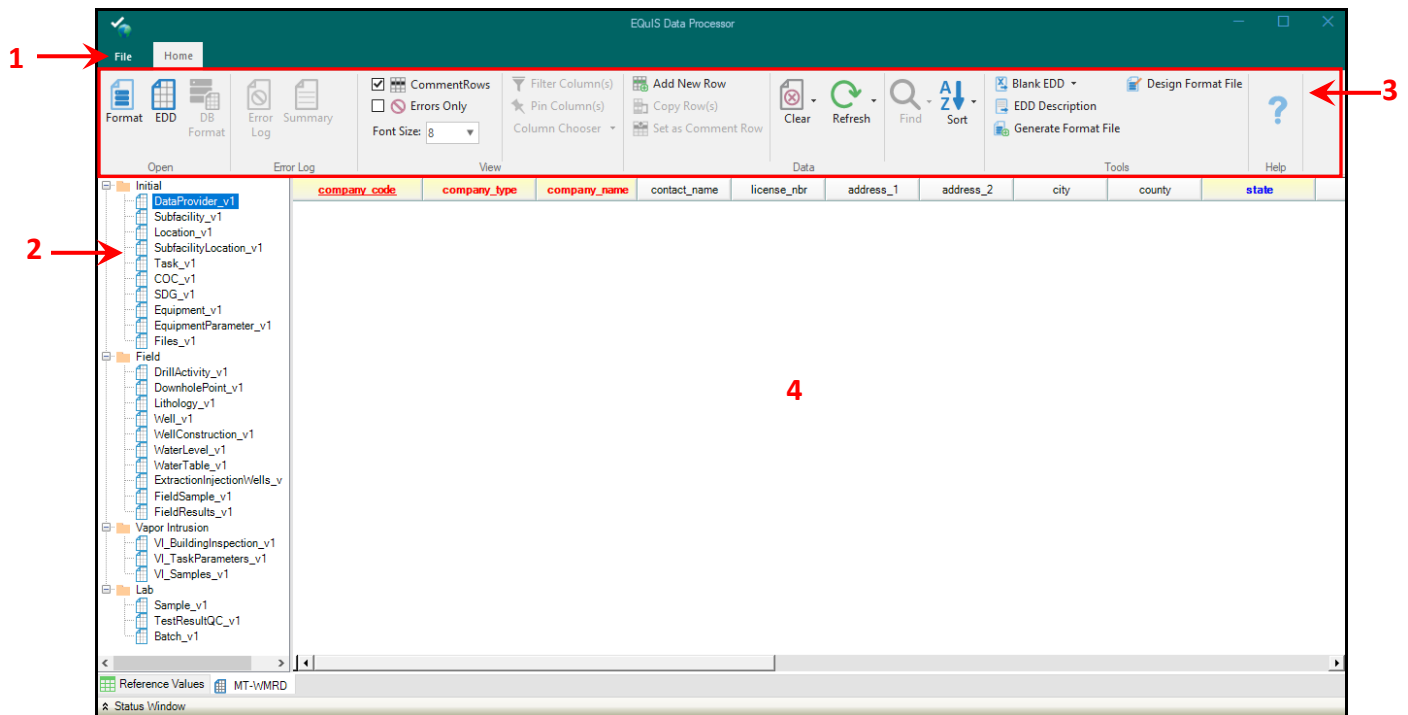
7. After the registration form is submitted, you should receive a confirmation email indicating your request is being processed. Keys will be emailed to you, typically within 48 hours. If you have not received your keys in 2 business days, email MontanaEQuIS@mt.gov.
8. Copy the keys from the email and paste them into the 'New Key Codes' field in the Workstation Licenses tab on the Software Registration window. If you closed out of EDP while waiting for the keys to arrive, follow steps 1-5 above to return to the Software Registration window.

9. After the keys have been entered, select 'Save Key(s)'. A screen stating that the registration succeeded should appear, select 'OK' and select 'OK' again to exit the Software Registration screen.
10. The EDD format is now registered to your computer and ready to use. To start using EDP, click the 'Format' button from the Home Ribbon and browse to the folder where the EDD format files were saved in Section 2.2 (C:\Program Files\EarthSoft\EDP\Formats). Select the .xse format file and click 'Open'.

3.0 USING EDP

3.1 EDP MAIN WINDOW

The EDP main window contains all the tools you will need to load, review, and update your EDD file.



1) File Menu

The file menu has options to:

- Save an EDD
- Sign & Submit
- Register EDD formats

2) Sections of the EDD Format

The left pane contains the sections of the EDD format. These correspond to the worksheets in the Excel version of the EDD. Once an EDD is loaded, clicking on each section will bring up the associated data.

3) Home Ribbon

The Home Ribbon stretches across the EDP window and has options to:

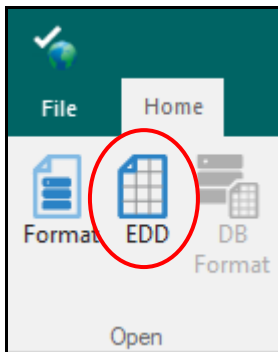
- Open a Format, EDD, Error Log, or EDD Summary
- Turn comment rows off
- Select to display only rows with errors
- Turn column filters on or off and pin columns
- Add a new row to an EDD section
- Clear data from an entire table, an entire EDD, or an entire data package
- Refresh data in a selected row, table, or everything
- Find and replace text
- Sort columns ascending or descending
- Open a new blank EDD or open a description of the EDD

4) Data

The main portion of the window is devoted to displaying the data associated with each section of the EDD. At the top of the data portion are column headers which have tool tips. To access these tool tips, simply hold your mouse over the column header name. The tool tips give a brief description of the field and include information about field length and whether a field is required, conditional, or optional.

3.2 LOADING EDD FILES

1. Click the 'EDD' button in the Home Ribbon. A format must be loaded before the EDD button will be available.



2. Browse to the EDD to be loaded and select 'Open'.
 - a. EDDs saved as Excel and zip files created from EDP can be opened this way.
 - b. To open EDD worksheets saved as text files, do not select the 'EDD' button. Right-click on the worksheet name in the left pane and select 'Load Data File'.

- EDP will load the file. Data checking is a background process that occurs while the EDD is being loaded. The amount of time it takes the EDD to load will depend on several factors including the EDD format being used and the number of records in the EDD. Once the file is loaded, the data can be displayed by selecting the sections in the left pane. Sections with errors, or warnings, will have red text and sections with no errors will be green.

Line	data_provider	sys_sample_code	sample_name	sample_matrix_code	sample_type_code	sample_source	parent_sample_code	sample_date	sys_loc_code
30	KJC	D1-AIR-10-15-18	D1-AIR-10-15-18	AE	FD	FIELD	GAC-MID-A-20181015	10/15/2018 2:30:0	GAC-MID-A
31	KJC	D2-AIR-02-23-18	D2-AIR-02-23-18	AE	FD	FIELD	GAC-MID-B-20180223	2/23/2018 11:50:0	GAC-MID-B
32	KJC	D2-AIR-03-19-18	D2-AIR-03-19-18	AE	FD	FIELD	GAC-MID-B-20180319	3/19/2018 3:00:00	GAC-MID-B
33	KJC	D2-AIR-05-16-18	D2-AIR-05-16-18	AE	FD	FIELD	GAC-MID-B-20180516	5/16/2018 2:45:00	GAC-MID-B
34	KJC	D2-AIR-06-18-18	D2-AIR-06-18-18	AE	FD	FIELD	GAC-MID-B-20180618	6/18/2018 4:00:00	GAC-MID-B
35	KJC	D2-AIR-07-18-18	D2-AIR-07-18-18	AE	FD	FIELD	GAC-MID-B-20180718	7/18/2018 3:00:00	GAC-MID-B
36	KJC	D2-AIR-08-13-08	D2-AIR-08-13-08	AE	FD	FIELD	GAC-MID-B-20180813	8/13/2018 4:30:00	GAC-MID-B
37	KJC	D2-AIR-10-15-18	D2-AIR-10-15-18	AE	FD	FIELD	GAC-MID-B-20181015	10/15/2018 2:45:0	GAC-MID-B
38	KJC	D1-AIR-02-23-18	D1-AIR-02-23-18	AE	FD	FIELD	GAC-MID-A-20180223	2/23/2018 3:00:00	GAC-MID-A
257	KJC	D1-GW-10-02-18	D1-GW-10-02-18	WG	FD	FIELD	L-88-12(20181002)	10/2/2018 9:05:00	L-88-12
259	KJC	D1-GW-11-19-18	D1-GW-11-19-18	WG	FD	FIELD	15-9D(20181119)	11/19/2018 11:45:	15-9D
260	KJC	D1-GW-12-12-18	D1-GW-12-12-18	WG	FD	FIELD	15-9D(20181212)	12/12/2018 9:55:0	15-9D
275	KJC	D1-GW-09-05-18	D1-GW-09-05-18	WG	N	FIELD	HALLETT MW-1-20180	9/5/2018 6:15:00	HALLETT MW-
278	KJC	7L01(20180605)	7L01(20180605)	WP	N	FIELD		6/6/2018 2:35:00	7L01
279	KJC	7P17(20180605)	7P17(20180605)	WP	N	FIELD		6/5/2018 9:20:00	7P17
280	KJC	7Q01(20180605)	7Q01(20180605)	WP	N	FIELD		6/5/2018 9:30:00	7Q01
281	KJC	D-1(20180604)	D-1(20180604)	WG	FD	FIELD	PMW-5(20180604)	6/4/2018 1:00:00	PMW-5
282	KJC	DUP1(20180605)	DUP1(20180605)	WP	FD	FIELD	7Q01(20180605)	6/5/2018 8:00:00	7Q01
283	KJC	DUP1(20180605)	DUP1(20180605)	WG	FD	FIELD	13-5(20180605)	6/6/2018 8:00:00	13-5
690	KJC	D1-GW-06-06-18	D1-GW-06-06-18	WG	FD	FIELD	E-8(20180605)	6/6/2018 11:40:00	E-8
691	KJC	D1-GW-07-05-18	D1-GW-07-05-18	WG	FD	FIELD	ISCO-2(20180705)	7/5/2018 9:25:00	ISCO-2

- The end goal is to have all sections green. Some formats have warnings, which allows the data to be loaded but alerts the data provider to take a second look. Warnings will color the sections red, but they are still ok to load if the data provider has confirmed they are correct.

3.3 CORRECTING ERRORS

As described in Section 1.0, the EDP application performs a series of formatting checks on the EDD and then identifies any records that have errors. The fields with errors will be shaded different colors depending on the type of error. A description of the error is provided when the cursor is placed over the field. In the example below, the sample_matrix_code values highlighted green indicate they are not valid reference values.

Line	data_provider	sys_sample_code	sample_name	sample_matrix_code	sample_type_code	sample_
30	KJC	D1-AIR-10-15-18	D1-AIR-10-15-18	AE	FD	FIELD
31	KJC	D2-AIR-02-23-18	D2-AIR-02-23-18	AE	FD	FIELD
32	KJC	D2-AIR-03-19-18	D2-AIR-03-19-18	AE	FD	FIELD
33	KJC	D2-AIR-05-16-18	D2-AIR-05-16-18	AE	FD	FIELD
34	KJC	D2-AIR-06-18-18	D2-AIR-06-18-18	AE	FD	FIELD
35	KJC	D2-AIR-07-18-18	D2-AIR-07-18-18	AE	FD	FIELD
36	KJC	D2-AIR-08-13-08	D2-AIR-08-13-08	AE	FD	FIELD
37	KJC	D2-AIR-10-15-18	D2-AIR-10-15-18	AE	FD	FIELD
38	KJC	D1-AIR-02-23-18	D1-AIR-02-23-18	AE	FD	FIELD
257	KJC	D1-GW-10-02-18	D1-GW-10-02-18	WG	FD	FIELD
259	KJC	D1-GW-11-19-18	D1-GW-11-19-18	WG	FD	FIELD
260	KJC	D1-GW-12-12-18	D1-GW-12-12-18	WG	FD	FIELD
275	KJC	D1-GW-09-05-18	D1-GW-09-05-18	WG	N	FIELD
278	KJC	7L01(20180606)	7L01(20180606)	WP	N	FIELD
279	KJC	7P17(20180605)	7P17(20180605)	WP	N	FIELD
280	KJC	7Q01(20180605)	7Q01(20180605)	WP	N	FIELD
281	KJC	D-1(20180604)	D-1(20180604)	WG	FD	FIELD
282	KJC	DUP1(20180605)	DUP1(20180605)	WP	FD	FIELD
283	KJC	DUP1(20180606)	DUP1(20180606)	WG	FD	FIELD
690	KJC	D1-GW-06-06-18	D1-GW-06-06-18	WG	FD	FIELD
691	KJC	D1-GW-07-05-18	D1-GW-07-05-18	WG	FD	FIELD

For most errors, there are two correction methods:

1. **Correct directly in EDP:** Click in the error field and type the correct value. If the field is restricted to a list of valid values, the valid values will be provided in a drop-down list by clicking on the down arrow located on the left side of the field. Once an error is corrected and the cursor is moved out of the field (i.e., user clicks on another field), the shading signifying an error should disappear. If you believe you have corrected an error, but the field remains shaded, refresh the EDD by selecting 'Refresh Table' in the Home Ribbon.
 - a. If you correct errors directly in EDP, make sure to save your updates to your original EDD you loaded. See Section 3.4 on saving changes to the EDD file.
2. **Correct in original EDD:** Exit the EDP application and open the EDD file. Correct the errors in the EDD file, resave the EDD, and then re-load the EDD back into EDP to check for additional errors.

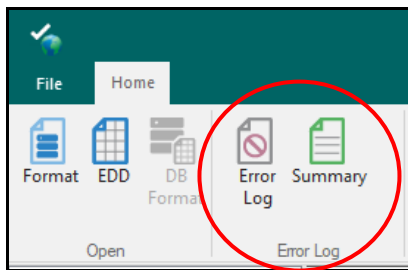
NOTE: If data providers believe a new reference value is required, email the reference value request to MontanaEQUIS@mt.gov.

3.3.1 Error Logs

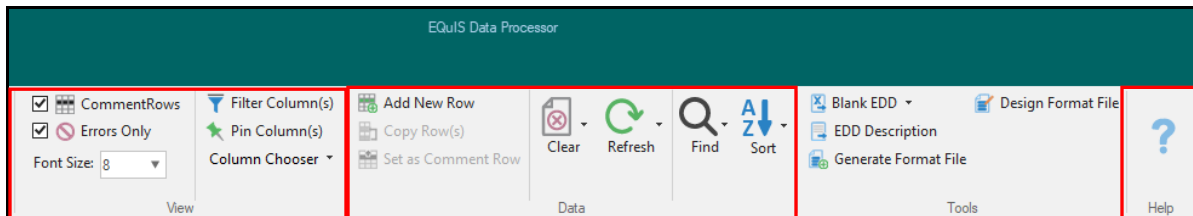
If there are errors present after an EDD has been loaded, the error log is a useful tool. EDP has two types of error logs:

- **Error Log:** A detailed list of each error including worksheet, column, row, and type for each error in the EDD.
- **Error Summary:** A summary that lists an error count for each error value within each section and column.

Each error log can be exported as an Excel or HTML file. To access the Error Logs, click on the 'Error Log' or 'Summary' buttons in the Error Log section of the Home Ribbon.



3.3.2 Home Ribbon Features to Assist in Correcting Errors



There are several tools in the Home Ribbon to assist in correcting errors:

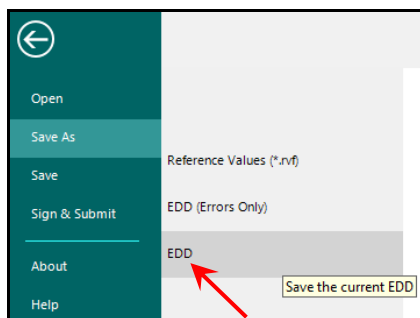
- In the View section:
 - Comment Rows: Check the box to show comment rows. Comment rows are non-data rows, typically the two header rows in each section of your EDD. Outside of EDP, mark a row as a comment row by adding a pound sign before the first character (#).
 - Errors Only: Check the box to show only rows with errors. This is very helpful when searching for records with errors, especially in larger EDDs.
 - Filter Columns: Select 'Filter Columns' to turn on the column filter feature. When on, the filter icon will appear next to each column name. To filter a column, select the filter icon and choose your desired filter option.
 - Pin Columns: Select 'Pin Columns' to turn on the pin column feature. When on, the pin icon (a small push pin) appears next to each column name. To pin a column so it will not move, click the pin icon next to the column.

- In the Data section:
 - Add New Row: By selecting 'Add New Row', a blank row will be added to the bottom of the current EDD section you're viewing. This allows the user to enter data directly into the EDD using the EDP interface. The format rules are applied as the data is entered.
 - Set as Comment Row: If a comment row appears as a data record, highlight the row and select 'Set as Comment Row'.
 - Find and Replace: The 'Find' and 'Replace' function allows searching the EDD for specified values and then replacing those values with another value. This function is useful when there are a number of similar values that need to be changed.
 - Sort: After selecting a column, select Sort to sort the records in ascending (A to Z, smallest to largest) or descending (Z to A, largest to smallest) order.
- Help: The help button will open EarthSoft's most up-to-date EDP documentation. This documentation is not managed by DEQ, but can provide additional information for experienced EDP users.

3.4 SAVING CHANGES TO THE EDD FILE

Changes made to the EDD directly in the EDP application are not automatically saved to the original EDD file that was loaded. To save the changes made:

1. Select 'File', 'Save as', 'EDD'.



2. Browse to where you would like to save the file. If you want to save the EDD as an Excel workbook with each section on a separate worksheet, select 'Excel Workbook' from the 'Save as type:' drop-down menu.

3.5 SUBMITTING DATA TO WQX EQUIS ENTERPRISE

3.5.1 Email (final step in data submission)

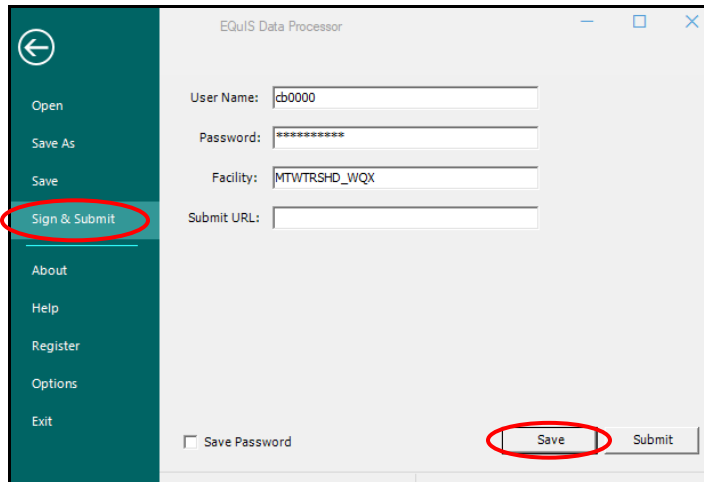
After saving the EDD in Excel format, fill out the MT-eWQX Submittal Form as required in the MT-eWQX guidance manual (Section 6.2) and submit water quality data by email according to the manual (Section 6.3).

3.5.2 Sign and Submit Tool

NOTE: Do not use this tool unless requested by the applicable DEQ program.

Sign and Submit is a tool designed to facilitate submitting data to EQuIS Enterprise. It automatically creates a data package containing all the data, any attached documents, and user credentials. In order to use this tool, the user must have an active EQuIS Enterprise user name and password.

1. Load EDD data into EDP and make sure all errors are resolved.
2. Select 'File' and 'Sign & Submit'.
3. Enter EQuIS Enterprise User Name, Password, and Facility ID you will be submitting data to. Contact your project officer if you are not sure what Facility to submit to.



4. Click 'Save'. Browse to the location where you want your file to be saved and click 'Save'. Once the zipped EDD package is saved, a confirmation window will appear indicating 'EDD Signed and Saved'. Click 'OK' to close.
5. The zipped EDD package's name consists of CurrentDate.FacilityCode.FormatFileName.zip. This zip file can now be submitted to DEQ as directed by the program you are submitting to.